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Volume Seven

Number Four

SCHOOL OF MINES AND METALLURGY

UNIVERSITY OF MISSOURI

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SEPTEMBER 1915

REGISTER OF GRADUATES

ROLLA, MISSOURI

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FEB 21 1918

SCHOOL OF MINES AND METALLURGY

UNIVERSITY OF MISSOURI

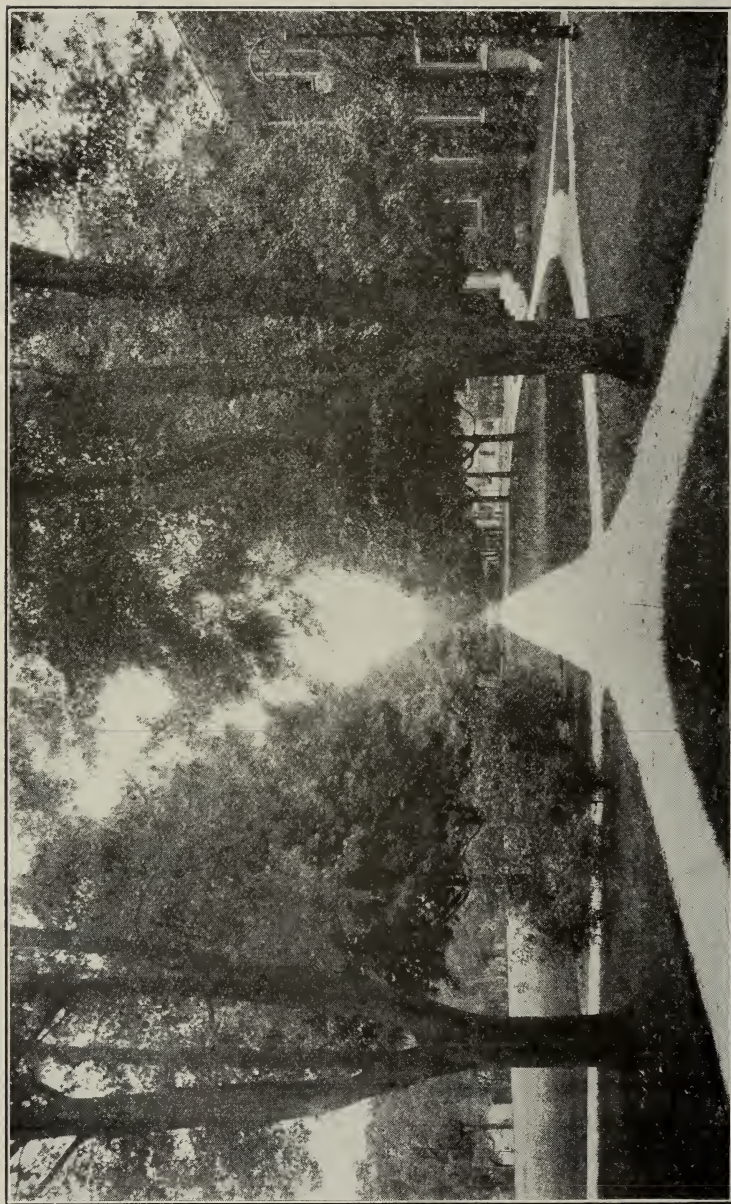


REGISTER OF GRADUATES



ROLLA, MISSOURI

1915



CAMPUS VIEW.

BOARD OF CURATORS

S. L. BAYSINGER.....	Rolla, Mo.
JOHN H. BRADLEY.....	Kennett, Mo.
D. R. FRANCIS.....	St. Louis, Mo.
H. B. McDANIEL.....	Springfield, Mo.
ALBERT D. NORTON.....	St. Louis, Mo.
J. C. PARRISH.....	Vandalia, Mo.
C. B. ROLLINS.....	Columbia, Mo.
SAM SPARROW	Kansas City, Mo.
G. L. ZWICK.....	St. Joseph, Mo.

EXECUTIVE COMMITTEE OF THE SCHOOL OF MINES AND METALLURGY

S. L. BAYSINGER.....	Rolla.
ALBERT D. NORTON.....	St. Louis.
G. L. ZWICK.....	St. Joseph.

OFFICERS OF THE COMMITTEE

S. L. BAYSINGER.....	Chairman.
ALBERT D. NORTON.....	Vice-Chairman.
EDW. KAHLBAUM.....	Secretary.
C. M. KNAPP.....	Treasurer.



SOUTH GATE—CAMPUS VIEW.

FACULTY

ALBERT ROSS HILL,

President of the University.

A. B., Dalhousie University, 1892; Ph. D., Cornell University, 1895; LL. D., University of South Carolina, 1905; Dalhousie University, 1908; Westminster College, 1909; Washington University, 1915; Lafayette College, 1915.

AUSTIN LEE McRAE,

Director and Professor of Physics.

B. S., University of Georgia, 1881; S. D., Harvard University, 1886.

JOSEPH WAYNE BARLEY,

Professor of English and Modern Languages.

A. B., 1897; A. M., 1905; William Jewell College. Ph. D., University of Pennsylvania, 1911.

DURWARD COPELAND,

Professor of Metallurgy.

S. B., Massachusetts Institute of Technology, 1903; Met. E., School of Mines, 1915.

GUY HENRY COX,

Professor of Geology and Mineralogy and Secretary of the Faculty.

B. S. in General Science, Northwestern University, 1905; M. A., University of Wisconsin, 1908; Ph. D., University of Wisconsin, 1911; E. M., School of Mines, 1914.

GEORGE REINALD DEAN,

Professor of Mathematics.

C. E., School of Mines, 1890; B. S. in Mathematics and Physics, School of Mines, 1891.

CARROLL RALPH FORBES,

Professor of Mining.

B. S., Michigan College of Mines, 1902; E. M., Michigan College of Mines, 1903.

VICTOR HUGO GOTTSCHALK,

Professor of Chemistry.

B. S. in Chemistry and Metallurgy, School of Mines, 1898; M. S., School of Mines, 1900.

ELMO GOLIGHTLY HARRIS,

Professor of Civil Engineering.

C. E., University of Virginia, 1882.

FRANK EDWARD DENNIE,

Associate Professor of Athletics and Physical Director.

B. S. in Civil Engineering, Brown University, 1909.

LEON ELLIS GARRETT,

Associate Professor of Mathematics.

B. S. in General Science, School of Mines, 1901.

HORACE THARP MANN,

Associate Professor of Metallurgy and Ore Dressing.

B. S. in Mining Engineering, School of Mines, 1908; M. S. in General Science, School of Mines, 1909; E. M., School of Mines, 1910.

JOSEPH HENRY BOWEN,

Assistant Professor of Shop Work and Drawing.

Graduate, Miller School, Virginia.

CHARLES YANCEY CLAYTON,

Assistant Professor of Ore Dressing and Metallurgy.

B. S. in Metallurgy, School of Mines, 1913.

CHARLES LAURENCE DAKE,

Assistant Professor of Geology and Mineralogy.

A. B., 1911; A. M., 1912; University of Wisconsin.

JOHN CHARAVELLE INGRAM,

Assistant Professor of Chemistry.

B. S. in General Science, School of Mines, 1913.

EDGAR SCOTT McCANDLISS,

Assistant Professor of Civil Engineering.

B. S. in Civil Engineering, Purdue University, 1909.

ROBERT JOHN ANDERSON,

Instructor in Metallurgy and Research Assistant.

B. S. in Met., Case School of Applied Sciences, 1914.

WALTER LOGIE DOBIE,

Instructor in Mineralogy.

B. S., University of Wisconsin.

RALPH EARL DUFFY,

Instructor in Drawing.

B. S. in E. E., University of Missouri, 1908.

FLOYD HILL FRAME,

Instructor in Physics and Electricity.

A. B., Clark College, 1912.

NEIL CHARLES HUTSINPILLAR,

Instructor in English.

B. A., Ohio State University, 1908.

VAN BUREN HINSCH,

Instructor in Mathematics.

B. S., School of Mines, 1909.

DONALD HEWSON RADCLIFFE,

Instructor in Geology and Mineralogy.

B. S., School of Mines, 1913.

WILLIAM HARRY RISHER,

Instructor in Mining and Surveying.

B. S. in C. E., Purdue University, 1912.

MARTIN HARMON THORNBERRY,

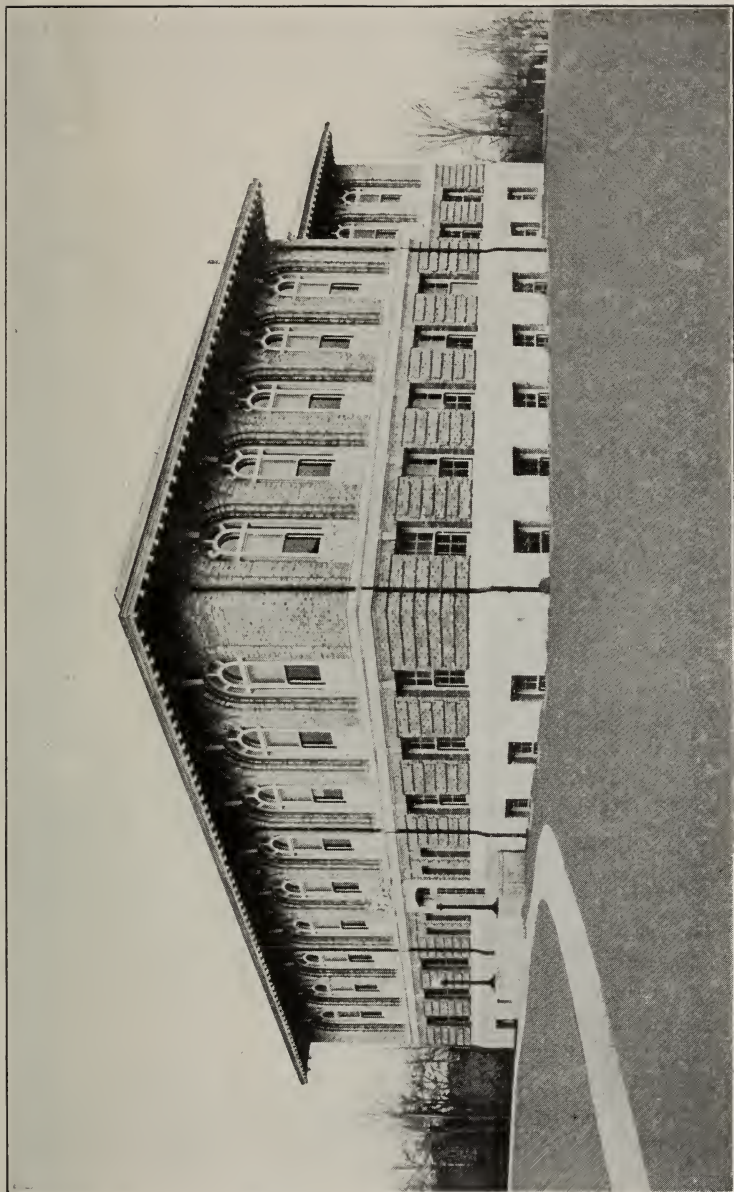
Research Assistant,

B. S., School of Mines, 1912.

GERALD THOMAS WILKINSON,

Instructor in Modern Languages.

A. B., Wabash College, 1911; A. M., Harvard University, 1912.



PARKER HALL
Library and Auditorium.

The School of Mines and Metallurgy is a Department of the University of Missouri. It offers four-year curricula leading to the Bachelor degree, and five-year curricula leading to the Professional degrees.

ENTRANCE REQUIREMENTS.

Fifteen high school units are required for admission to the Freshman class. Of these, three must be in English, one and a half in Algebra, one in Plane Geometry and one-half in Solid Geometry. The other nine may be selected from any high school units. Conditions may be allowed in not more than two units. These conditions must be removed within one year.

Graduates of approved high schools with the above credits are admitted by certificate without examination.

Those who are not graduates of approved high schools must pass the entrance examination in the above units.

Persons who are twenty-one years of age may be admitted without examination as special students and permitted to study any subject they are qualified to pursue. Special students are not candidates for a degree.

Students with grades from other colleges are admitted to advanced standing.

DEGREES.

The first degrees were conferred at commencement in June, 1874, when two men received the degree of Civil Engineer, and one man the degree of Mining Engineer. These degrees continued to be conferred upon the completion of the prescribed courses of study on all who matriculated before 1889.

In 1889 the Bachelor's degree was offered, and those who entered after that date received a Bachelor of Science degree upon the completion of the prescribed course. The catalogue of 1889-90 offered the following degrees:

Scientific Degrees With Titles.

1. The degree of Bachelor of Science in Mathematics and Physics is conferred upon one who has passed examination on all of the subjects of instruction in the Course of Mathematics and Physics.

2. The degree of Bachelor of Science in Chemistry is conferred on one who has passed examination on all of the work of the special Chemical Course.

3. The degree of Bachelor of Science in General Science is conferred on one who has passed examination on all of the prescribed subjects of instruction in the General Course.

Professional Degrees With Titles.

1. The degree of Bachelor of Science in Civil Engineering is conferred on one who has passed examination on all of the subjects of instruction in the Civil Engineering Course.

2. The degree of Bachelor of Science in Mining Engineering is conferred on one who has passed examination on all of the subjects of instruction in the Mining Engineering Course.

3. The degree of Bachelor of Science in Mechanical Engineering is conferred on one who has passed examination on all of the subjects of the Mechanical Engineering Course.

4. The degree of Civil Engineer, Mining Engineer or Mechanical Engineer is conferred on one who, having graduated in Civil, Mining or Mechanical Engineering, and received the Bachelor's Degree therein, and who has identified himself with the profession during a period of not less than three years, and who during that time has demonstrated by work his fitness for his chosen profession.

The catalogue for 1894-5 offered the degree of Bachelor of Science in Chemistry and Metallurgy, and the degree of Metallurgical Engineer for the first time; and the degree of Bachelor of Science in Mechanical Engineering and the degree of Mechanical Engineer were discontinued.

From that time on there has been but slight modification in the title of the degrees. The 1914-15 catalogue offers the following degrees:

I. The degree of Bachelor of Science in Mine Engineering will be conferred upon a candidate for a degree who has completed the prescribed work of the first three years of Curriculum I., sixty-two units elective work, and all of the required trips of Curriculum I. The final year's work must be done in residence.

II. The degree of Bachelor of Science in Metallurgy will be conferred upon a candidate for a degree who has completed the prescribed work of the first three years of

Curriculum II., sixty-two units elective work, including a thesis, and all of the trips required in Curriculum II. The final year's work must be done in residence.

III. The degree of Bachelor of Science in Civil Engineering will be conferred upon a candidate for a degree who has completed the required subjects and the prescribed number of electives of Curriculum III., and a satisfactory thesis. The final year's work must be done in residence.

IV. The degree of Bachelor of Science in General Science will be conferred upon a candidate who has completed the prescribed subjects and electives of Curriculum IV., and a satisfactory thesis. Candidates for degrees in General Science must matriculate in the General Science Curriculum not later than the beginning of the Junior year. The final year's work must be done in residence.

V. The degree of Engineer of Mines, Metallurgical Engineer, Civil Engineer, will be conferred upon a candidate who holds the degree of Bachelor of Science in Mine Engineering, Bachelor of Science in Metallurgy, Bachelor of Science in Civil Engineering, respectively, and who has completed in residence fifty-three units and a satisfactory thesis; or upon a graduate in Curriculums I., II., III., respectively, who has had professional experience in a responsible position for not less than three years. A satisfactory thesis recording the result of some original investigation or independent research in a subject connected with his work, accompanied by such drawings as may be necessary to illustrate it, is required of each candidate for an advanced degree.

A candidate for a professional degree is required to submit a list of companies for whom he has worked, with the positions held, the kind of work done, and the length of service.

When a candidate's professional work has been along another line than that in which he received his college training, he may receive the professional degree in that line after five years of practice and by complying with the foregoing statement concerning detailed report of employment and thesis.

Only one professional degree will be allowed for work done *in absentia*.

VI. The degree of Master of Science will be conferred only upon graduates in General Science who have completed a year's graduate work in residence and demon-

strated ability by research work and a thesis. Each candidate who is not a graduate of this institution in Curriculum IV. must satisfy the language requirements of Curriculum IV., in addition to completing the graduate requirements. A candidate who is not giving his entire time to graduate study will be unable to earn the degree in one year's residence.

VII. The degree of Engineer of Mines will be conferred upon a candidate who completes Curriculum VII. This is a two-year Curriculum, open to candidates who have received the degree of Bachelor of Science in Civil Engineering, Bachelor of Science in Mechanical Engineering, or Bachelor of Science in Electrical Engineering from another institution.

Summary of Degrees.

From the table on the next page, it will be seen that from 1874 to 1894, inclusive, 29 degrees Mining Engineer and 30 degrees Civil Engineer were conferred.

From 1894 to 1915, inclusive, 267 degrees Bachelor of Science in Mine Engineering were conferred.

From 1891 to 1907, inclusive, 22 degrees Bachelor of Science in Chemistry and Metallurgy were conferred.

From 1909 to 1915, inclusive, 17 degrees Bachelor of Science in Metallurgy were conferred.

In 1891 one degree Bachelor of Science in Mathematics and Physics was conferred.

From 1893 to 1915, inclusive, 49 degrees Bachelor of Science in Civil Engineering were conferred.

From 1891 to 1915, inclusive, 64 degrees Bachelor of Science in General Science were conferred.

From 1900 to 1915, inclusive, six degrees Master of Science were conferred for a year's post-graduate study in residence.

From 1909 to 1915, inclusive, four degrees Engineer of Mines were conferred for a year's post-graduate study in residence.

From 1896 to 1915, inclusive, professional degrees have been conferred upon graduates in responsible positions, as follows:

- 57 degrees Engineer of Mines,
- 12 degrees Metallurgical Engineer,
- 5 degrees Civil Engineer.

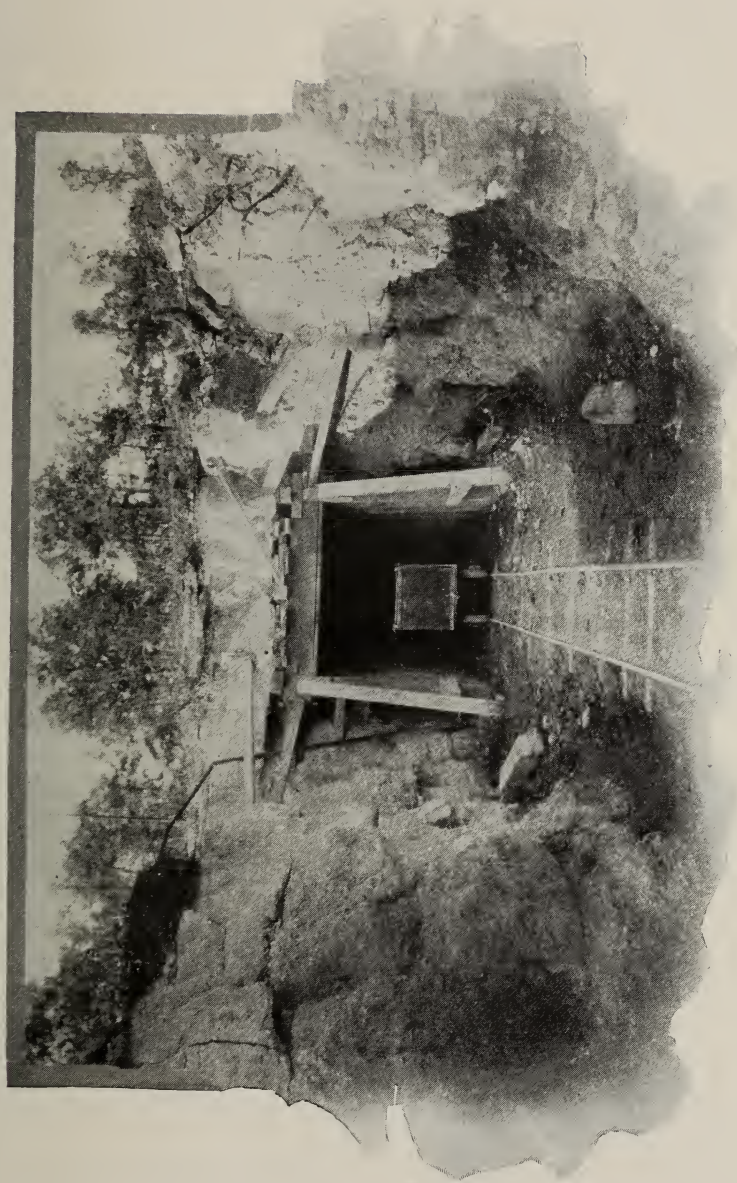
A total of 563 degrees were conferred on 456 men and 3 women.

DEGREES

Conferred by School of Mines and Metallurgy
1874-1915

Year	M.E	C.E.	B. S. in M.E	B. S. in C. & M.	B. S. in Met	B. S. in M. & P.	B. S. in C.E.	B. S. in G. S.	M. S.	E. M.	Adv. Deg.		
											E. M.	Met E	C. E.
1874	1	2											
1875	1	1											
1876	3	2											
1877	2	1											
1878	2	2											
1879	1	1											
1880	2	0											
1881	1	2											
1882	2	5											
1883	1	1											
1884	4	3											
1885	2	1											
1886	1	2											
1887	2	2											
1888	0	0											
1889	0	0											
1890	0	1											
1891	1	0		1		1		1					
1892	1	2		2									
1893	2	0		0			1	1					
1894	0	2	1	2									
1895		2	2	2			3						
1896		1	0	0			0				1		
1897		4	0	0			3					1	
1898		1	1	1			2						1
1899		5	3	3			4	1					
1900		7	0	0			0	2	1		1		
1901		9	1	1			3	2			1		1
1902		10	1	1			1	1			3		
1903		11	0	0			4	0			8	1	1
1904		16	2	2			0	0	1		1		
1905		22	1	1			2	0			2		1
1906		18	1	1			4	0			1	1	
1907		12	5	5			3	1			1	1	
1908		20					4	5			5		
1909		18			1		4	11	1	1	4		
1910		30			3		3	6	1	1	8	3	1
1911		26			3		0	5			4		
1912		23			3		2	11	1	1	4	2	
1913		10			4		1	7			1		
1914		12			2		1	8	1	1	5		
1915		9			1		3	2			7	3	
Total	29	30	267	22	17	1	49	64	6	4	57	12	5

Grand Total, 563



MINE TUNNEL.

ALUMNI

- Abernathy, George Elmer, B. S., '14.....*Dixon, Mo.*
Superintendent, Electric Light & Power Plant.
- Adams, Henry Farnum, B. S., '12.....*P. O. Box 1331, Clifton, Ariz.*
Cost Department on Construction, New Smelter, Arizona Copper Co.
- Albertson, Maurice Merton, B. S., '11, E. M., '15.....*Cobalt, Canada*
Assistant Engineer, Mining Corporation of Canada.
- Alexander, Curtis, E. M. and C. E., '84.. *Apt. 320, San Luis Potosi, Mex.*
- Alexander, Raphael Currier, B. S., '03; E. M., '06.. *Medicine Lodge, Kan.*
Ranching.
- Alexander, Thompson, C. E., '01.....*Portland, Ore.*
Albers Dock No. 2, Union Bridge & Construction Co.
- Allen, Ernest James, B. S., '11.....*Hazel Green, Wis.*
Cleveland Mining Co.
- Ambler, John Owen, B. S., '06.....*P. O. Box 947, Douglas, Ariz.*
Assistant Superintendent, Calumet & Arizona Mining Co.
- Andersen, Hector George Sylvester, B. S., '08; E. M., '12.....
.....*Hotel Turpin, San Francisco, Cal*
Metallurgy—Research Work.
- Anderson, Perry Barton, B. S., '97.....*Topeka, Kans.*
- Andrus, Dexter Eli, B. S., '13.....*Mesquite, N. Mex.*
Ranching.
- Armstrong, Richard Edward, B. S., '08.....*San Francisco, Cal.*
Panama-Pacific Exposition.
- Baker, Arnold George, B. S., '07.....*P. O. Box 104, Chouteau, Mont.*
Baker & Ward Irrigation Engineering.
- Baker, Charles Armstrong, B. S., '08.....*Ft. Madison, Iowa*
- Barker, Ralph, B. S., '98.....
- Barrett, Edward Philip, B. S., '09.....*Santa Ana, Calif.*
- Bartlett, Albert Babbitt, B. S., '07; E. M., '10.....*Cheyenne, Wyo.*
Deputy State Engineer.
- Barton, Robert Arthur, B. S., '06; C. E., '10.....*Vernon, B. C.*
Resident Engineer, Municipality of Coldstream.
- Baueris, William Albert, B. S., '09.....
.....*St. 824 Vancouver Bk., Vancouver, B. C.*
Pacific Dredging Co.
- Beach, James Keller, B. S., '11.....*1517 Commerce St., Dallas, Tex.*
- Bean, William Yantis, C. E., '78.....*510 Pine St., St. Louis, Mo.*
Inspector and Instructor Grand Commandery Knights Templar of Missouri.
- Beard, John Warren, B. S., '09.....*Syracuse, N. Y.*
- Bell, Frank Rolla, B. S., '03.....*Bartlesville, Okla.*
Superintendent, Lanyon-Starr Smelting Co.
- Bedford, Robert Hardy, B. S., '06; E. M., '11.....*Grass Valley, Cal.*
Assistant Superintendent, North Star Mines.
- Benedict, Ralph Robert, B. S., '08.....*3547 Pasco St., Kansas City, Kan.*
Acting Executive Officer, Board of Park Commissioners.

- Benham Willard Miles, B. S., '15.....*Ray, Ariz.*
Ray Consolidated Copper Co.
- Bingham, Raymond Alexander, B. S., '11.....*Langloth, Pa.*
Chemist, American Zinc and Chemical Co.
- Black, James Kennedy, B. S., '04.....*St. Louis, Mo.*
Instructor in Chemistry, Washington University.
- Blake, Frank Orris, Jr., B. S., '10
524 C. W. Hellman Bldg., Los Angeles, Cal.
Superintendent of Refineries, El Oso Asphalt Co.
- Blake, True Walter, B. S., '11; E. M., '14.....*Novinger, Mo.*
Mining Engineer, Rombauer Coal Co.
- Bland, George Vest, B. S., '04.....*Ouray, Colo.*
Chief Ore Sorter, Waunaka M. & M. Co.
- Blaylock, Daniel Webster, B. S., '15.....*Flat River, Mo.*
Doe Run Lead Co.
- Bodman, John Whittlesey, B. S., '10.....1103 E. 65th St., Chicago, Ill.
Assistant Chemical Director, N. K. Fairbanks Co.
- Boland, Earl Frederick, B. S., '10...109 Lexington Ave., Syracuse, N. Y.
Chemist, Crucible Steel Company of America.
- Boucher, Leonidas James, B. S., '14.....*Hannibal, Mo.*
Atlas Portland Cement Co.
- Bowles, John Hyer, B. S., '08.....*Lake Springs, Mo.*
Farming.
- Bowles, James Joseph, B. S., '10.....*Lake Springs, Mo.*
Farming.
- Boyer, Fred Tete, B. S., '09...2025 Washington Av., Philadelphia, Pa.
Merchant & Evans Co.
- Boyer, George Hewitt, B. S., '08.....*Racine, Wis.*
General Electric Co.
- Boza, Hector, B. S., '11.....*Lima, Peru*
Mining Engineer.
- Bramson, Charles, B. S., '13.....8011 Idaho Ave., St. Louis, Mo.
Chemist, Provident Chemical Works.
- Branham, William Grover, B. S., '10
4a Humboldt, 40 Mex., D. F. Mexico
Cia, Mex. de Petrolío "El Aquilla."
- Bribach, Oscar Nicholas, B. S., '12.....*Sneffels, Colo.*
Chemist and Assayer, Atlas M. & M. Co.
- Brooks, John McMillen, B. S., '06.....*Knoxville, Tenn.*
- Brooks, Lyman H., Jr., B. S., '13.....*Romley, Colo.*
With the Murphy Mining Co.
- Broughton, Eugene Harding, B. S., '12...P. O. Box 918, Warren, Ariz.
Engineer and Assayer, Calumet & Arizona Mining Co.
- Brown, Joseph Jarvis, Jr., B. S., '05; E. M., '08,
420 Bank of Commerce Bldg., St. Louis, Mo.
General Manager, United Zinc Co.
- Brown, William Ernest, B. S., '07.....*Denver, Colo.*
- Brown, Wilton Rutherford, M. F., '78.....
- Bucky, De Nard Wilson, B. S., '01.....*Lark, Utah*
Ohio Copper Co.
- Bunten, James, B. S., '10.....*Canon City, Colo.*
City Engineer and County Surveyor.

- Burdick, Charles Adrian, B. S., '10; E. M., '15,
74 Broadway, New York, N. Y.
Mining Engineer.
- Burgher, Mark Bernardi, B. S., '06.....Hannibal, Mo.
Engineer and Contractor.
- Buskett, Evans Walker, B. S., '95; M. E., '07,
620 Joplin St., Joplin, Mo.
Baskett's Assay Office.
- Buskett, Mary Page, B. S., '93.....Seattle Heights, Seattle, Wash.
Teacher.
- Butler, Reginald Henry Brinton, B. S., '09; M. E., '12,
"Kirbymead" Hermon Hill, S. Woodford, Essex, England
English Army.
- Callaway, Scott David, B. S., '12.....17 East Madison St., Iola, Kan.
Chemist, La Harpe Smelter Co.
- Cameron, John Simpson, B. S., '97.....McAlester, Okla.
General Superintendent, Bache-Denman Coal Co.
- Caples, James Watts, B. S., '05.....Salmon, Idaho
City Engineer.
- Caples, Russell Bigelow, Jr., B. S., '10.....Anaconda Club, Anaconda, Mont.
Metallurgical Chemist, Anaconda Copper Mining Co.
- Carnahan, Thomas Samuel, B. S., '04.....Bingham, Utah
Mining Engineer, Utah Copper Mining Co.
- Carson, Arthur C., M. E., '80.....Room 2027, 42 Broadway, N. Y.
Mining Engineer.
- Castillon, Tirso, B. S., 14,
Avenida, Juarez No. 9, Torreon, Coah, Mexico
At Present, El Paso, Texas.
- Cavazos, Enrique, B. S., '09.....2 Allende, 21-2, Saltillo, Coah., Mexico
- Chamberlain, Ernest Lorenz, B. S., '09.....1402 12th Ave., Eldora, Iowa
Civil Engineer.
- Chamberlain, Harry Carleton, B. S., '05; E. M., '10....Gila Bend, Ariz.
Cornelia Copper Co.
- Chamberlain, Santiago, B. S., '09.....Monterey, Mexico
- Chase, James Howard, B. S., '12.....Logansport, Ind.
- Christopher, James Knight, B. S., '05,
317 Board of Trade Bldg., Kansas City, Mo.
- Clarke, George Clough, B. S., '99; E. M., '04.....
Deceased.
- Clark, Horace Herbert, B. S., '15.....136 S. Harvey Ave., Oak Park, Ill.
Public Service Co.
- Clark, John Charles, B. S., '11.....Bridgeport, Conn.
Sprague Meter Co.
- Clark, William Newton, B. S., '09.....
- Clarke, William Danels, B. S., '09.....Bakersfield, Cal.
Consulting Engineer.
- Clary, John Henry, B. S., '05.....Maryville, Mo.
County Highway Engineer.
- Claypool, William M., C. E., M. E., '84.....Needles, Cal.
Claypool & Co., General Merchandise.
- Clayton, Charles Yancey, B. S., '13.....Rolla, Mo.
Assistant Professor of Ore Dressing and Metallurgy, Missouri
School of Mines.

- Coaske, Paul Ephraim, B. S., '12.....*Sacramento, Cal.*
- Cody, Benjamin Horace, B. S., '11.....*P. O. Box 1003, Clifton, Ariz.*
Chemist, Arizona Copper Co., Ltd.
- Cody, Frank W., B. S., '13.....*Columbia, Mo.*
Proprietor and Manager, Athens Hotel.
- Cole, George W., C. E., '87.....
Deceased.
- Compton, James Crawford, B. S., '09.....*McMinnville, Ore.*
Superintendent, Asphalt Construction Co.
- Condon, George, B. S., '12.....*823 Diamond St., Butte, Montana*
Shift Boss, Anaconda Copper Co.
- Connolly, Harry Wade, B. S., '10.....*P. O. Box 718, McGill, Nev.*
Chemist, Steptoe Valley M. & S. Co.
- Conover, Cairy C., B. S., '12.....*Springfield, Ill.*
Chemist, National Zinc Co.
- Conrads, Ralph Augustus, B. S., '04.....*Magna, Utah*
Metallurgical Engineer, Utah Copper Co.
- Conway, Clifford Leroy, B. S., '12.....*Fairview, N. Mex.*
Superintendent Calumet Com. Co.
- Cook, Eldon Everett, B. S., '07.....*Osborn, Mo.*
Farmer.
- Cook, Paul Richardson, B. S., '07.....*Box 655, Guayaquil, Ecuador*
- Coover, Louie Lincoln, B. S., '12.....*Rye Valley, Baker Co., Ore.*
- Copeland, Durward, E. M., '15.....
Special Investigation of the Tin Industry in Asia, Europe and South
America. Home address, Rolla, Mo.
- Copeland, Robert Nathaniel, B. S., '11.....*Galena, Ill.*
Vinegar Hill Zinc Company.
- Copelin, Leonard Stephen, B. S., '13.....*Hayden, Ariz.*
Ray Consolidated Copper Co.
- Coppedge, Lindsay L., C. E., '78.....
Deceased.
- Cowen, Herman Cyril, B. S., '95; C. E., '98. *.62 Water St., Catskill, N. Y.*
Treasurer, Catskill Supply Co.
- Cowles, Frederick Ragland, B. S., '01.....*Keytesville, Mo.*
Principal, Keytesville High School.
- Cowperthwaite, Thomas, B. S., '05.....*P. O. Box 794, Warren, Ariz.*
Assistant to Chief Engineer, Calumet and Arizona Mining Co.
- Cox, Guy Henry, E. M., '14.....*Rolla, Mo.*
Professor of Geology and Mineralogy, School of Mines and Metal-
lurgy.
- Cox, William Rowland, E. M., '11.....*120 Broadway, New York City*
Consulting Mining Engineer.
- Cronk, Arthur Harrison, B. S., '12; E. M., '15.....*Rosiclare, Ill.*
Engineer, Rosiclare Lead & Fluospar Mines.
- Cullings, Jay, C. E., '86.....
Deceased.
- Cummings, Lister Merriken, B. S., '15.....*River Mines, Mo.*
Doe Run Lead Co.
- Cummins, Robert Patrick, B. S., '05.....*Frisco Building, St. Louis, Mo.*
Assistant Engineer, Frisco System.
- Cushwa, Claude Calvin, B. S., '14.....*Aurora, Nev.*

- D'Arcy, Arthur Ignatius, B. S., '03.....*Goldfields, Nev.*
 Manager, Goldfields Merger Mines.
- Daily, Cornelius Mark, B. S., '02; B. S., '03,
 4240 *Shaw Ave., St. Louis, Mo.*
 Civil Engineer, St. Louis Water Department.
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 Mine Leasing.
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 Merchant.
- Katz, Howard M., B. S., '13.....*Kissimmee, Fla.*
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 Superintendent Lower Mammoth Mining Co.
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Beard, J. W. *Syracuse*Boland, E. F. *Syracuse*Burdick, C. A. *New York*Carson, A. C. *New York*Cowen, H. C. *Catskill*Cox, W. R. *New York*Moore, P. A. *New York*Peterson, H. K. *New Rochelle*Pollard, A. L. *Batavia*

OHIO.

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OKLAHOMA.

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Moore, F. A. *Lead*
Morgan, G. B. *Rapid City*

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Knapenberger, Ralph. *Mascot*
Luther, W. A. *Chattanooga*
Schultz, J. E. *Knoxville*
Sherry, H. K. *Mascot*
Trent, A. L. *Mascot*

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Beach, J. K. *Dallas*
Castillon, Tirso. *El Paso*
Eardley, A. E. *Carrizo Springs*
Fowler, J. D. *Dallas*
Greene, J. W. *Gregory*
Gregory, J. A. *Dallas*
Hurtgen, John. *Galveston*
Minor, H. E. *Wichita Falls*
Norton, B. N. *El Paso*
Seamon, F. H. *El Paso*
Smith, L. X. *San Antonio*
Stroup, T. A. *Houston*
Walker, J. A. *El Paso*

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Carnahan, T. S. *Bingham*
Conrads, R. A. *Magna*
Detweiler, M. H. *Sunnyside*
Draper, J. C. *Salt Lake City*
Hand, H. A. *Salt Lake City*
Miller, C. R. *Bingham Canyon*
Price, E. E. *Salt Lake City*
Traugher, C. W. *Tooele*

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Riede, F. E. *Austinville*
Stoliker, E. O. *Mineral*

WASHINGTON.

Buskett, Mary P. *Seattle*
Taylor, H. J. *Seattle*
Vogt, G. C. *Seattle*

WISCONSIN

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Boyer, G. H. *Racine*
Elmore, C. E. *Hazel Green*
Hayes, D. I. *Benton*
Roesler, H. A. *Platteville*

WYOMING.

Bartlett, A. B. *Cheyenne*
Kaplan, A. L. *Holmes*
Park, Albert. *Alcoza*
Wood, C. R. *Sheridan*

WASHINGTON, D. C.

Fay, A. H.
Goldsborough, T. R.
Grabill, L. R.
McGrath, J. E.

ALASKA.

Kline, D. M. *Thane*

PHILIPPINE ISLANDS.

Elicano, V. *Massinloc, Tangles*

CUBA.

Webster, R. S. *Havana*

CANADA.

Albertson, M. M. *Cobalt, Ontario*
Barton, R. A. *Vernon, B. C.*
Baueris, W. A. *Vancouver, B. C.*
Dye, R. E. *Cobalt, Ontario*
Lachmund, Oscar.
..... *Greenwood, B. C.*
Sickly, R. G. *Cobalt, Ontario*
Thornhill, E. B. *Cobalt, Ontario*
Walker, J. P. *Kingston, Ontario*

MEXICO.

Alexander, Curtis.
..... *San Luis, Potosi*
Branham, W. G. *Mexico, D. F.*
Cavazos, Enrique. *Saltillo, Coah*
Chamberlain, Santiago. *Monterey*
Fernandez, A. L. *Monterey, N. L.*
Garcia, German. *Mexico, D. F.*
Gardiner, W. A. *El Oro*
Green, C. T. *Rosario, Sonora*
Hall, C. W. *Minaca, Chih.*
Harris, G. W. *Pachuca, Hgo.*
Hatch, S. R. *Cananea*
Hunt, L. H. *Pachuca, Hgo.*
King, C. L. *Pachuca*
Lynton, E. D. *Cananea*
Mapes, H. T. *Jalisco*
Martinez, C. E. *Saltillo, Coah.*
Minor, C. E. *Cananea*
Murphy, J. A. *Pachuca*
Rivera, Ramon. *Jalisco*
Soest, W. E. *Chihuahua, Chih.*
Stewart, A. J. *Jalisco*
Tayman, F. J. *Guerrero*

SOUTH AMERICA.

Boza, Hector*Lima, Peru*
 Cook, P. R.*Guayaquil, Ecuador*
 Diaz, Emilio*Llallagua, Bolivia*
 Easley, G. A.*La Paz, Bolivia*
 Grosberg, A.*Unica, Bolivia*
 Jochamowitz, Simon*Lima, Peru*
 Robson-C, Thcs.*Potosi, Bolivia*

ENGLAND.

Butler, R. H. B.
*S. Woodford, Essex*

RUSSIA.

Shah, A. M.*Vclna*
 Zirulick, Hyman*Minsk*

CHINA.

Tseung, T. C.
*Yunnanfu, Yunnan Prov.*

INDIA.

Raj, Shiv.*Tehri, Garhwah*

AFRICA.

Horner, P. K.
*Katanga, Congo Free State*

DECEASED.

Clark, G. C.
 Cole, G. W.
 Coppedge, L. L.
 Cullings, Jay

Deegan, F. J.
 Florreich, P.
 Gill, J. H.
 Greason, J. D.
 Harris, D. D.
 Martin, W. G.
 Millsap, T. H.
 Morris, E. H.
 Nesbitt, W. C.
 Owen, J. R. D.

ADDRESS UNKNOWN.

Barker, Ralph.
 Brown, W. R.
 Clark, W. N.
 Grove, C. D.
 Herdman, G. W.
 Lintecum, C. L.
 Manwaring, E. G. R.
 Martinez, J. G.
 May, Lawrence
 Neer, D. M.
 Paulette, R. J.
 Rogers, J. A.
 Schrantz, A. B.
 Schulze, E. V.
 Sebree, J. P.
 Sunada, Sakuki
 Thomas, G. S.
 Torrence, E. C.
 Walsh, F. H.
 Wiles, G. B.
 Woodhall, Geo., Jr.

N. B.—If you can furnish the address of any of these men, please send the information to Dr. A. L. McRae, Rolla, Mo.

PUBLICATIONS OF THE MISSOURI SCHOOL OF MINES

BULLETIN—GENERAL SERIES.

Vol. 1, No. 1, Dec. 1908. The human side of a mining engineer's life. Edmund B. Kirby. (Commencement address, June 10th, 1908.)

Vol. 1, No. 2, 38th Annual Catalogue, 1909-1910.

Vol. 1, No. 3, June, 1909. Education for utility and culture. Calvin M. Woodward. (Tau Beta Pi address.)

Vol. 1, No. 4, Sept., 1909. The history and the development of the Cyanide Process. Horace Tharp Mann.

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Vol. 2, No. 2, 39th Annual Catalogue, 1910-1911. (Out of print.)

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Vol. 3, No. 2, March 1st, 1911. 40th Annual Catalogue, 1911-1912.

Vol. 3, No. 3, June, 1911. Providing for future generations. E. R. Buckley. (Tau Beta Pi address, May 24th, 1911.)

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Vol. 4, No. 1, Dec., 1911. Fortieth anniversary of the School of Mines and Metallurgy of the University of Missouri. Parker Hall Memorial address. Laying of cornerstone of Parker Hall, Rolla, Missouri, October 24th, 1911.

Vol. 4, No. 2, March, 1912. 41st Annual Catalogue, 1912-1913.

Vol. 4, No. 3, June, 1912. Mining and civilization. J. R. Finlay. (Commencement address, May 31st, 1912.)

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Vol. 5, No. 2, March, 1913. 42nd Annual Catalogue, 1912-1913.

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Vol. 6, No. 1, Never published.

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Vol. 7, No. 4, September, 1915. Register of Graduates, 1874-1915.

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